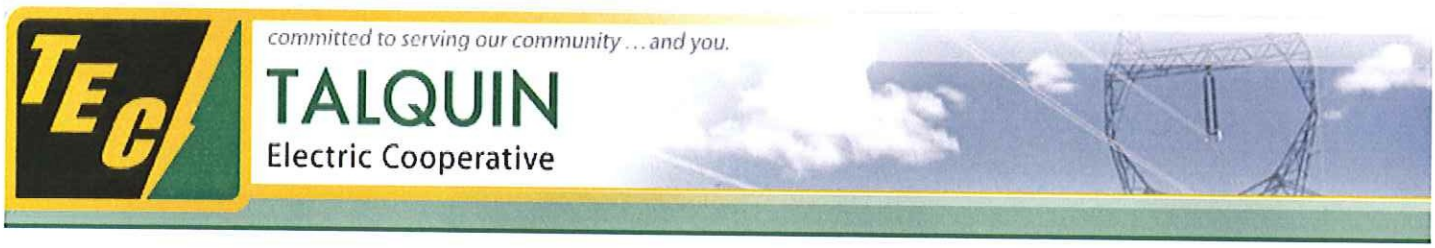


ENERGY USAGE ANALYSIS

TEC MEMBER
I.D. # 123456789

Located at;
123 Any Street
Tallahassee, Florida
32311

TEC Pole # Z3-23-1-10
Meter # 61-593-928

ENERGY SERVICES
DAN L. ARD
MARCH 4, 2009

A FREE SERVICE OF TALQUIN ELECTRIC COOP.
CONTACT US AT 627-7651

SUMMARY OF FINDINGS

1. The residence is a site built structure with approximately 1,213 square feet of conditioned space. Multiple building envelope issues existed and were imaged in this document. All glass surfaces appear to have no SHGC rating, a measurement was taken at the time of analysis of 86 Btu's per hour of heat gain.

2. I observed and imaged a cold air loss from around the inadequate refrigerator gasket.

3. The HVAC system is a 30,000 Btu with a name plate rated 8.87 EER, below the ACEE recommended 11.6 EER. Some duct work leakage was imaged and can be seen on page 12 of this document. A timed meter measurement revealed a cost to operate of $.37 per hour, Department of Energy standards indicate a monthly cost of use of $88.13.

4. Other contributing factors are covered within this document.

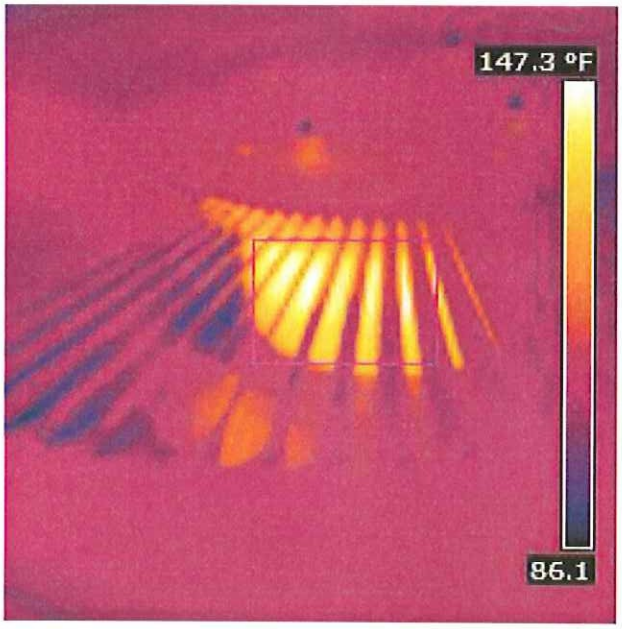
RESIDENCE EXTERIOR

- This is the Southwest facing of the home. Light colors are an appropriate choice for this climate zone.

- A limited amount of green space shading exists to reduce thermal gain.

HVAC

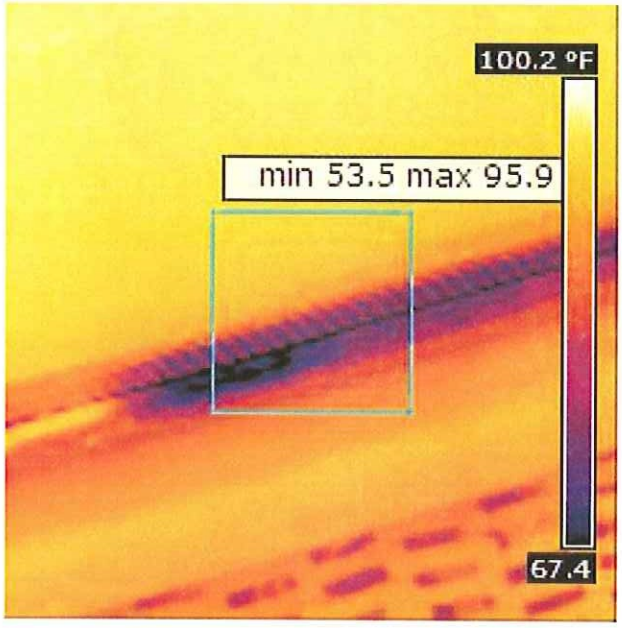
- These images are of the compressor component of the HVAC system.



- Some heat retention exists in the fan motor, which should be further inspected to determine possible efficiency reduction.

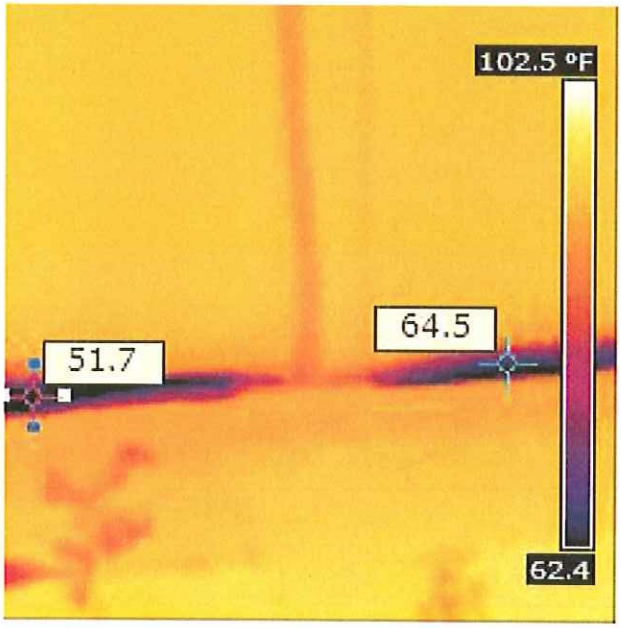
CONDITIONED AIR LOSS

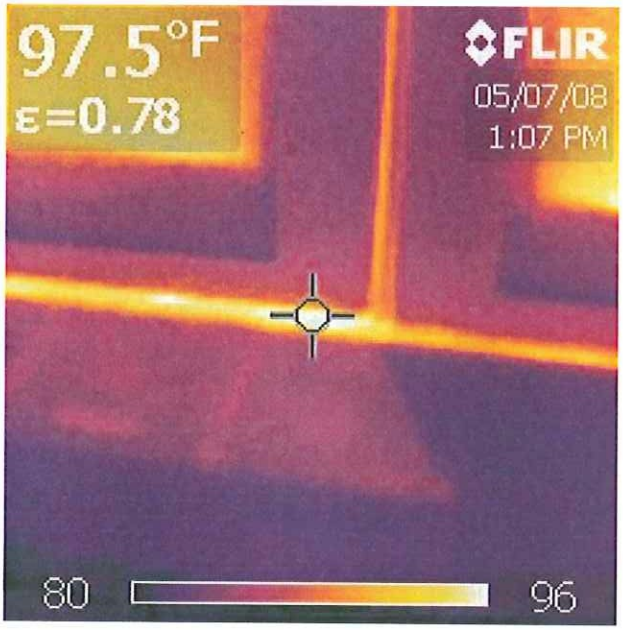
- This is an image of the front entrance door.



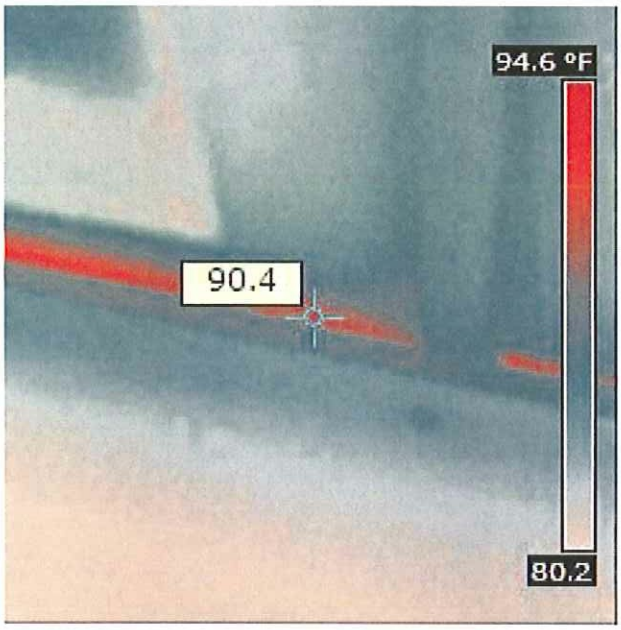
- The IR image reveals the conditioned air loss past the inadequate door seal. The following page shows additional images of either conditioned air loss or outside air infiltration issues.

AIR INFILTRATION

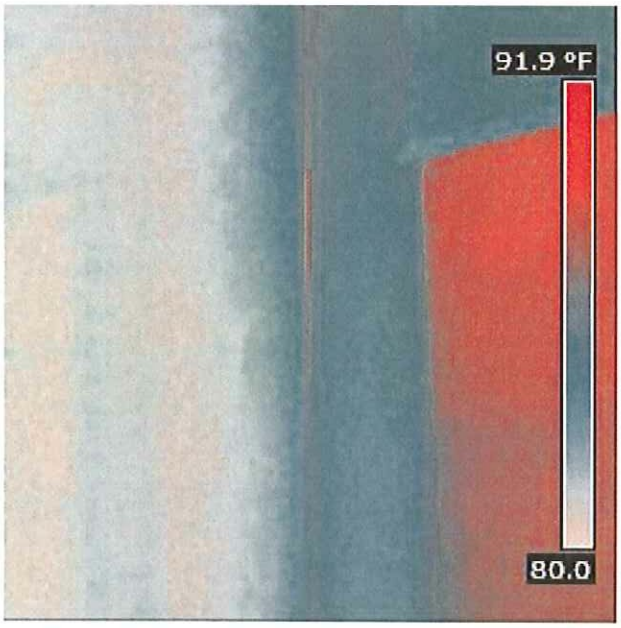




ADDITIONAL IMAGES

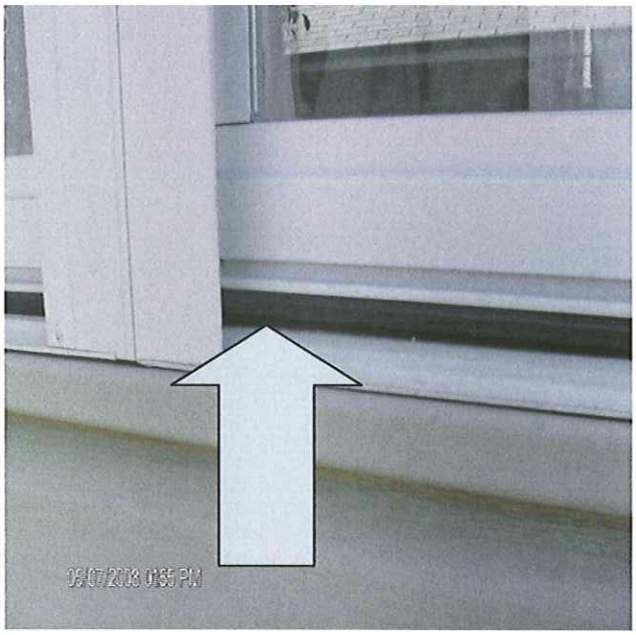


- These are images of heat transfer into the conditioned space. This condition will greatly influence the ability of the HVAC system to cool the home.



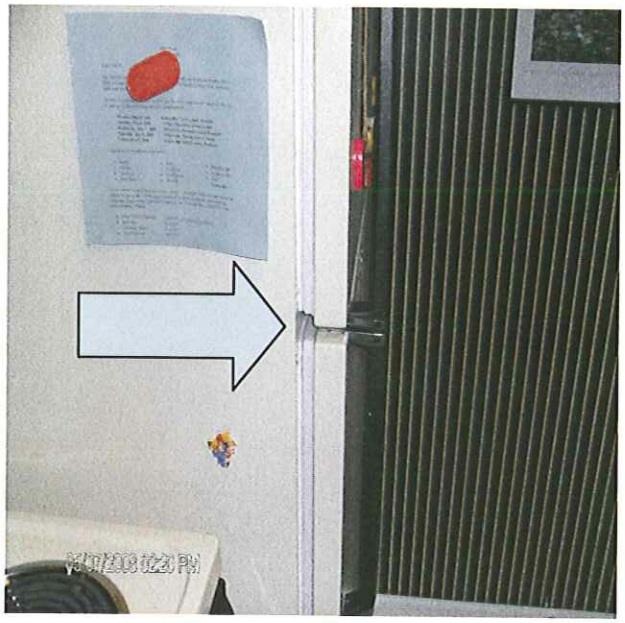
- This condition can be corrected by replacing inadequate weather-stripping and installing a solar radiant barrier film on all the windows.

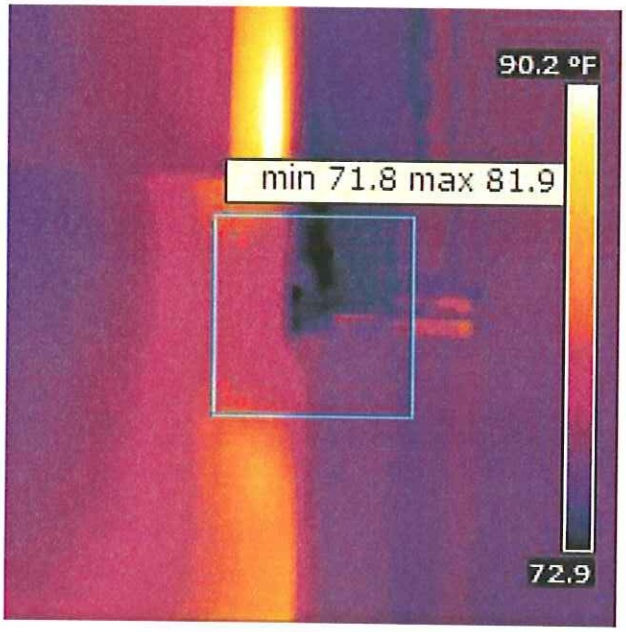
AIR TRANSFER GAPS



- Although not clearly visible, this window does not completely seal as it should. This will allow outside air into the structure.

REFRIGERATOR

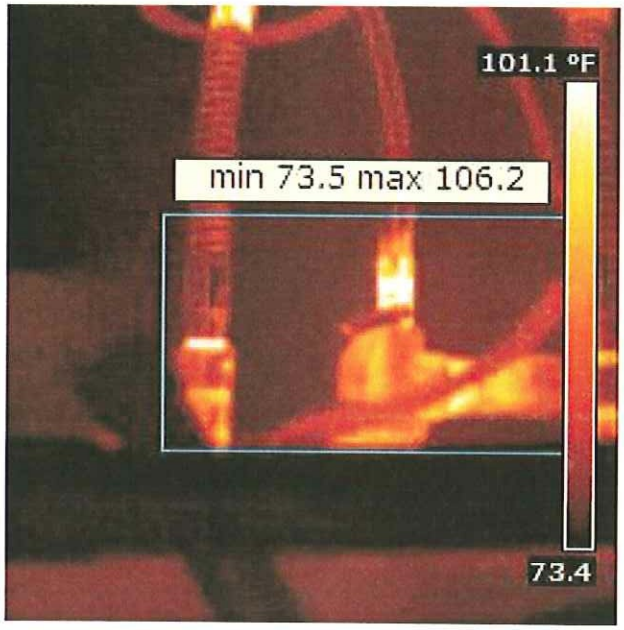




- These images reveal the cold air loss past the gasket seal. This condition will severely reduce the efficiency of the unit. This may be corrected by cleaning the gasket seal and door facing to remove any debris. If this does not correct the problem a qualified service technician should be contacted to repair or replace the gasket.

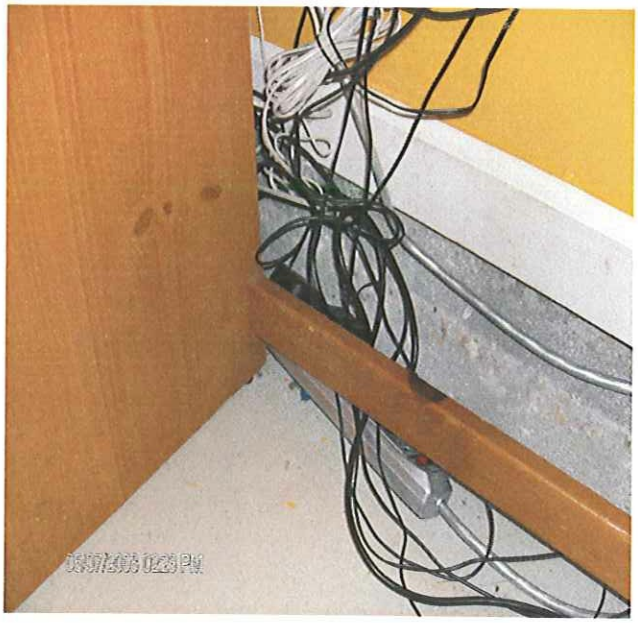
WATER HEATER

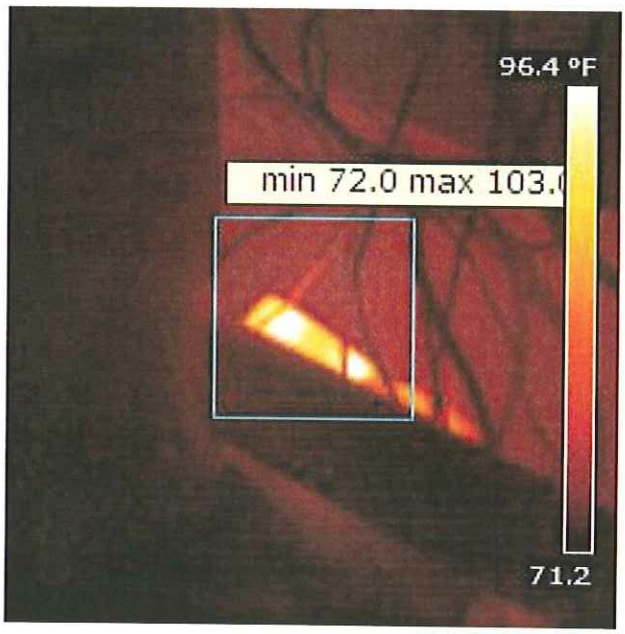
- The photograph to the left shows the lack of insulation on the exposed water lines.



- The Thermal Image reveals the result of the un-insulated water lines. This condition reduces the efficiency of the system.

ELECTRONICS

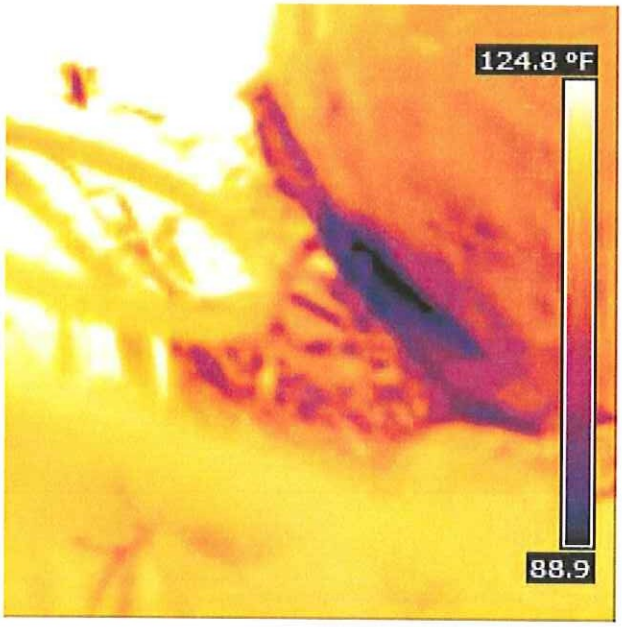


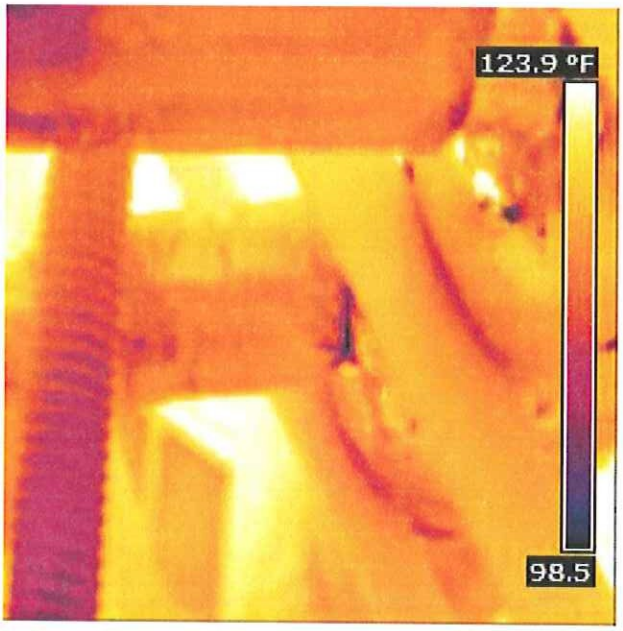


- All electronic components continue to draw power even when not actively used. This condition is commonly known as "vampire power". The power strip seen here can be turned off at the switch, which will correct the energy loss. This is only one of the locations seen within the home that contribute to the overall energy consumption.

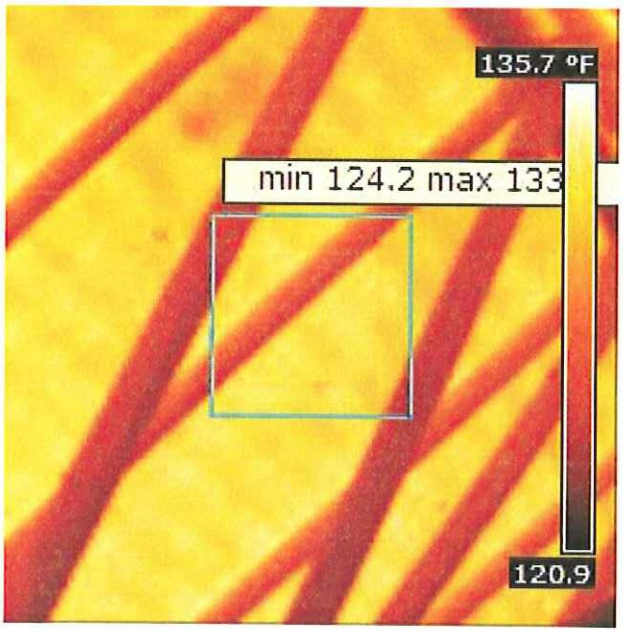
DUCT LEAKAGE

- These photos show the cold air loss with the A/C in use. The dark blue areas show the air loss. These connections should be sealed to increase the efficiency of the system.





RADIANT HEAT GAIN



- This IR image reveals the extreme heat gain within the attic space. This condition will effect the ability of the HVAC to effectively or efficiently cool the home.

SUGGESTED CORRECTIVE ACTIONS

1. I recommend that the refrigerator gasket be repaired as discussed on page 9 of this document.

2. I suggest that a solar radiant barrier film be installed on the windows to reduce the amount of heat gain now experienced. Sample film used at the time of analysis, reduced heat gain from 86 Btu's per hour to 14 Btu's per hour.

3. The building envelope should be more tightly sealed to reduce the conditioned air losses. This will require replacement of the weather-stripping around the exterior doors.

4. Insulation should be installed on the exposed water lines to increase the efficiency of the water heater.

5. I recommend that a power attic exhaust fan be installed to reduce the extreme heat gain now effecting the ability of the HVAC to cool the residence.